Rejections Over Prior Art

According to the Office Action, claims 1-33 and 40-42 remain rejected under 35 U.S.C. 103(a) "as being unpatentable over Snodgrass et al. ('748 or '211 or '610)." Snodgrass et al. was cited for its disclosure of a partial clone of a hematopoietin receptor having a WSX motif, which was later identified as a form of the Ob/leptin receptor, and for its suggestion that the receptor can be used to screen for ligands or to make antibodies. According to the rejection, "in view of the fact that the receptor has been identified as a hematopoietin receptor with a WSX motif, it would have been prima facie obvious to used [sic] this WSX receptor to make the various claimed antibodies that would possess all of the properties, characteristics of the claims, consistent with the teachings in this prior art that antibodies to the WSX receptor could be made."

As claims 40-42 were cancelled by the Preliminary Amendment mailed on January 25, 2000, their rejection is moot. The rejection of the remaining claims is believed to be legally improper, and is respectfully traversed.

Upon entry the Preliminary Amendment mailed on January 25, 2000, the claims concern agonist antibodies which specifically bind to the extracellular domain of the WSX receptor 13.2 (the extracellular domain within SEQ ID NO: 2), and decrease body weight or fat-depot weight or food intake in an obese animal. In the last paragraph of the present Office Action, the Examiner acknowledges the entry of the "most recent Pre-Amendment", but notes that the addition of the underlined functional limitation to the antibody "does not serve to distinguish this from the prior art." This appears to imply that the anti-hematopoietin receptor antibodies, the making of which is suggested (but not specifically disclosed) by Snodgrass et al. would inherently have the functional properties of the antibodies claimed in the present application.

Legal Standard

Nonobviousness, as a condition of patentability, means that an invention must not have been obvious to one of ordinary skill in the art to which the subject matter of the invention pertains at the time of the invention and in the light of the teaching of the prior art. Nonobviousness and novelty are different and distinct requirements. While, in certain cases, a prior art reference may be novelty destroying because of what it inherently discloses or embodies, such inherent feature may be relied upon to establish obviousness only if such inherency would have been obvious to one of ordinary skill in the art at the time of the invention.

As the Federal Circuit noted in Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 1576, 230 USPQ 81, 88 (Fed. Cir. 1986), "Inherency and obviousness are distinct concepts."

Snodgrass et al.

As discussed in applicants' responses to previous Office Action, and admitted in the present Office Action, Snodgrass et al. disclose a partial clone encoding a receptor (Hu-B1.219) that they identify as a novel member of the hematopoietin receptor family. Snodgrass et al. also note that, based upon its expression in certain human fetal and tumor cells, Hu-B1.219 is potentially useful in the diagnosis of cancer or marking of fetal tissues (column 2, lines 55-58). Hu-B1.219 is further described as useful in screening for antibodies, peptides, or other ligands that act as agonists or antagonists of the Hu-B1.219 receptor (column 10, lines 19-23).

As the Examiner has conceded, Snodgrass et al.

- do not expressly disclose antibodies to the Hu-B1.219 receptor;
- do not identify Hu-B1.219 as an OB receptor; and
- do not identify leptin/OB protein as the native ligand of Hu-B1.219.

Accordingly, the most relevant teaching of Snodgrass et al., at best, amounts to an invitation to make and screen for agonist antibodies that specifically bind Hu-B1.219 and mimic one of the proposed biological activities of Hu-B1.219, e.g. hematopoietic activity. Even the making of such antibodies would not have been a routine task, since it is usually not a routine matter to produce agonist antibodies that mimic any biological property of a native ligand to a receptor. Furthermore, as Snodgrass et al. were unaware that the receptor is an OB receptor, the cited Snodgrass et al. references have absolutely no teaching, suggestion or hint to make agonist antibodies that mimic the ability of leptin/OB protein to decrease body weight or fat-depot weight or food intake in an obese animal. In view of the disclosure of Snodgrass et al., and general knowledge in the art at the date the present invention was made (without the benefit of the present invention), a person skilled in the art would not have been motivated to use Hu-B1.219 to screen for such antibodies, and could not have done so with a reasonable expectation of success.

It would be legally improper to hold the claimed antibodies obvious on the ground that the claimed biological properties of reduction of body weight or food intake might have been inherent in the antibodies suggested by Snodgrass et al. Even if one assumes that this is the case,

of which there is no evidence, the inherency of these properties would not have been obvious to a person skilled in the art at the time of the present invention.

In view of the foregoing arguments, the Examiner is respectfully requested to reconsider and withdraw the present rejection.

The present application is believed to be in *prima facie* condition for allowance, and an early action to that effect is respectfully solicited. If a telephone interview would be of assistance in advancing prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: August 24, 2000

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